



Date: 28-04-2020

NC/QC/YPD/2020-21/W6-LD-C1

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).

{ Name of Work :- Construction of lead of drain to connect storm water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

PHYSICAL TESTS ON CEMENT

: 53,
: O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	153 min	Shall not be less than 30 min
2	Final setting time	275 min	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	1.93 %	Not to exceed 10.0%
4	Soundness test (by Le-Chatelier's method)	1.84 mm	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	28.51 N/Sq mm	Shall not be less than 27 N/Sqmm

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Date: 28-04-2020

NC/QC/YPD/2020-21/W6-LD-PCC1

1. TESTING OF COARSE AND FINE AGGREGATES:

Sub: Testing of Coarse and Fine aggregates to be used for bed concrete.
{ Name of Work :- Construction of lead of drain to connect storm water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

1. COARSE AGGREGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007)	
		Single size	Graded
40mm	40 mm Sample	85-100	90 - 100
20mm	100.00	0 -20	30- 70
10mm	58.95	0 -5	10- 35
4.75mm	24.35	-----	0- 5
	3.70		

2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

4.75mm		3.75			
2. FINE AGGREGATES					
TABLE - SIEVE ANALYSIS:					
Specification as Per IS: 383-1970(Reaffirmed 2002)					
IS Sieve Size, mm		Percentage Passing			Remarks
Percentage Passing		Zone-I	Zone-II	Zone -III	
04.75	98.30	90-100	90-100	90-100	The Sample Conforms to Grading Zone-II
02.36	81.05	60-95	75-100	85-100	
01.18	76.85	30-70	55-90	75-100	
600.mic	41.35	15-34	35-59	60-79	
300.mic	28.65	5-20	8-30	12-40	
150.mic	8.20	0-10	0-10	0-10	

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Date: 02-05-2020

NC/QC/YPD/2020-21/W6-LD-C2

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{ Name of Work :- Construction of lead of drain to connect strom water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

PHYSICAL TESTS ON CEMENT

: 53,
: O.P.C

TABLE 1.1:

	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	159 min	Shall not be less than 30 min
2	Final setting time	280 min	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	1.96 %	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	1.91 mm	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	28.12 N/Sq mm	Shall not be less than 27 N/Sqmm

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Date: 02-05-2020

NC/QC/YPD/2020-21/W6-LD-FA1

1. TESTING OF FINE AGGREGATES:

Sub: Testing of Fine Aggregates.

{ Name of Work :- Construction of lead of drain to connect storm water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

TABLE - 1.1: SIEVE ANALYSIS:

IS Sieve Size (mm)	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -II	
75	97.30	90-100	90-100	90-100	The Sample Conforms to Grading Zone-II
4.75	86.85	60-95	75-100	85-100	
02.36	66.40	30-70	55-90	75-100	
01.18	41.75	15.34	35-59	60-79	
600. mic	17.35	5-20	8-30	12-40	
300.mic	8.95	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Bulking of Sand	001	17.93 %	-----
2	Silt Content	----	0.60 %	Not more than 8%
3	Specific Gravity	----	2.62	-----

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BBMP, Bangalore - 92

Date: 02-05-2020

NC/QC/YPD/2020-21/W6-LD-CA1

1. TESTING OF COARSE AGGREGATES (20 mm):

Sub: Testing of Construction Materials.

{ Name of Work :- Construction of lead of drain to connect storm water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

Table 1.1: SIEVE ANALYSIS:

Sieve Size (mm)	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
		Single size	Graded
20 mm	100.00	100.00	100.00
40 mm	95.80	85-100	90 - 100
20 mm	43.05	0 - 20	25 - 55
10 mm	7.65	0 - 5	0 - 10
4.75 mm			

TABLE 1.2 :

SL No	Test conducted	Results	Requirements as per IS:383-1970 & Tests Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	27.96 %	Not to exceed 25 %
2.	Crushing value	26.41 %	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

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Date: 02-05-2020

NC/QC/YPD/2020-21/W6-LD-S1

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 10 and 12 mm TMT Steel.
{ Name of Work :- Construction of lead of drain to connect storm water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

TABLE 1

Sl. No.	Details	For 10 mm		For 12 mm	
		Test Results	Min Req. as per IS 1786-2008	Test Results	Min Req. as per IS 1786-2008
01	Observed diameter of bar	10.0 mm	10.0 mm	12.0 mm	12.0 mm
02	Observed Wt/m Length Kg/m	0.620	0.567	0.891	0.834
03	Proof stress/Yield stress, f_y , N/mm ²	550.0	500.0	554.0	500.0
04	Bend/ Re bend Test	Ok	---	Ok	---
05	Percentage of Elongation, %	20.90	16.00	20.10	16.00
06	Ultimate Tensile Strength N/mm ²	632.0	565.0	638.0	565.0

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Date: 11-05-2020

NC/QC/YPD/2020-21/W6-LD-CB1

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{ Name of Work :- Construction of lead of drain to connect storm water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M₂₀

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm ²	Maximum Load in K.N	Compressive Strength (N/ mm ²)	Avg. Value
I	001	04-05-20	11-05-20	07	22500	370	16.44	16.67
	002	"	"	"	"	380	16.89	
	003	"	"	"	"	375	16.67	

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Date: 14-05-2020

NC/QC/YPD/2020-21/W6-LD-CB2

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{ Name of Work :- Construction of lead of drain to connect storm water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M₂₀

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm ²	Maximum Load in K.N	Compressive Strength (N/ mm ²)	Avg. Value
I	001	07-05-20	14-05-20	07	22500	380	16.89	16.81
	002	"	"	"	"	370	16.44	
	003	"	"	"	"	385	17.11	

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Date: 01-06-2020

NC/QC/YPD/2020-21/W6-LD-CB1A

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{ Name of Work :- Construction of lead of drain to connect storm water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M₂₀

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm ²	Maximum Load in K.N	Compressive Strength (N/ mm ²)	Avg. Value
1	001	04-05-20	01-06-20	28	22500	505	22.44	22.59
	002	"	"	"	"	520	23.11	
	003	"	"	"	"	500	22.22	

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Date: 04-06-2020

NC/QC/YPD/2020-21/W6-LD-CB2A

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{ Name of Work :- Construction of lead of drain to connect strom water drain at Dasarahalli in Ward No.06. }

Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Projects Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Nataraj T, Bangalore.

**RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE
CUBE SPECIMENS**

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M₂₀

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm ²	Maximum Load in K.N	Compressive Strength (N/ mm ²)	Avg. Value
1	001	07-05-20	04-06-20	28	22500	515	22.89	22.81
	002	"	"	"	"	500	22.22	
	003	"	"	"	"	525	23.33	

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